



# PHILIPS

**Philips Medical Systems**

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SERVICE MANUAL

732

SYSTEM

## Installation Manual PCR Compano

**MCR 2311**

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## SERVICE MANUAL – SYSTEM

### Installation Manual PCR Compano

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### MCR 2311

In case there are any questions concerning this manual,  
please send this LOPAD via fax to +49 40 5078 - 2481

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1  
2  
3 ...20            (04.0)

## Contents

1	Introduction .....	4
1.1	System components .....	4
1.2	Documentation .....	4
1.3	Important to know .....	4
1.4	Data flow .....	5
2	System installation.....	6
2.1	Introduction .....	6
2.2	Installation overview .....	6
2.3	Connection diagram .....	6
2.4	Installing the Reader.....	7
2.4.1	Unpack the Reader .....	7
2.4.2	Checking the items supplied .....	9
2.4.3	Removing the packing materials .....	10
2.4.4	Removing the transport lockings.....	10
2.4.5	Setup for inch cassettes .....	11
2.4.6	Checking the CPU settings .....	13
2.4.7	Connecting the cables.....	14
2.5	Installing the Preview Unit .....	15
2.5.1	Unpacking .....	15
2.5.2	Checking the items supplied .....	15
2.5.3	Cable connections.....	15
2.5.4	Software installation and configuration .....	15
2.5.5	Certificate of authenticity .....	16
2.6	Installing the PCR User Terminal(s).....	16
2.6.1	Unpacking .....	16
2.6.2	Checking the items supplied .....	16
2.6.3	Cable connections.....	17
2.6.4	Software installation and configuration .....	17
2.7	Installing the EasyVision.....	18
2.7.1	Unpacking .....	18
2.7.2	Cable connections.....	18
2.7.3	Software configuration .....	18
3	First start-up.....	19
3.1	Final checks.....	20
3.2	Cleaning the equipment.....	20

## 1 Introduction

### 1.1 System components

A PCR Compano system consists of the following sub-systems:

- Compano Reader (IR-346RU)
- PCR Preview Unit (IBM Netvista PC + optional touch screen)
- PCR User Terminal (IBM PC + Operation Panel)
- EasyVision RAD (Sun Workstation + monitor)

### 1.2 Documentation

The following documentation is delivered:

<b>CD-ROM: PCR Compano Systems documentation</b>	4512 984 2668x
Containing all service manuals, release bulletins, etc. in PDF	

#### System

Installation Manual PCR Compano	This Manual
---------------------------------	-------------

#### PCR Preview Unit

Service Manual PCR Preview Unit / Console Compano S	4512 984 2458x
Release Bulletin PCR Preview Unit	4512 984 2460x
Spare Parts List PCR Preview Unit / Console Compano S	4512 984 2463x

#### PCR Compano Reader

Service Manual PCR Compano Reader	4512 984 2457x
Release Bulletin PCR Compano Reader	4512 984 2459x
Spare Parts List PCR Compano Reader	4512 984 2462x

#### PCR User Terminal

Release Bulletin PCR User Terminal R 1.5	4512 984 2476x
Service Manual sub system	4512 984 0490x

#### EasyVision RAD

Release Bulletin EasyVision RAD R4.2V2	4522 220 8599x
Service Manual sub system	4512 984 2236x
Service Manual unit	4522 981 0439x

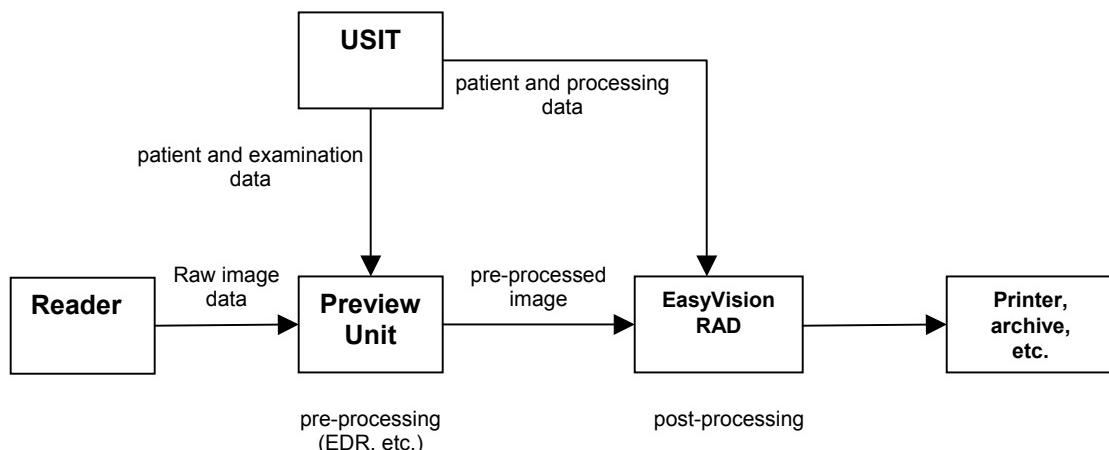
### 1.3 Important to know

The PCR Preview Unit serves as a gateway between Reader and EasyVision, emulating a PCR AC500 Reader. In other words: Preview Unit + Compano Reader act as an AC500. The Reader reads the image and transfers raw data to the Preview Unit. Preprocessing (EDR etc.) is then done in the Preview Unit. Afterwards the image is sent to the EasyVision for the final post processing and distribution to third party destinations like printers, archives etc.

Set the Reader type in the USIT configuration accordingly to AC500/5000. The **Reader ID** in the USIT configuration must always be set to "A", even if there are more than one Readers in the same cluster. Otherwise the USIT comes up with an error message: "Reader ID mismatch".

When configuring the Reader within the EasyVision RAD configuration program you need to configure a **Reader Node** using the IP address of the Preview Unit.

## 1.4 Data flow



## 2 System installation

### 2.1 Introduction

This chapter describes the steps to be performed during installation of a PCR Compano system. Detailed procedures can be found in the belonging sub-system manuals and Release Bulletins.

The PCR Preview Unit serves as a gateway between Reader and EasyVision, emulating a PCR AC500 Reader. In other words: Preview Unit + Compano Reader act as an AC500. The Reader reads the image and transfers raw data to the Preview Unit. Preprocessing (EDR etc.) is then done in the Preview Unit. Afterwards the image is sent to the EasyVision for post processing and distribution to other destinations like printers, archives etc.

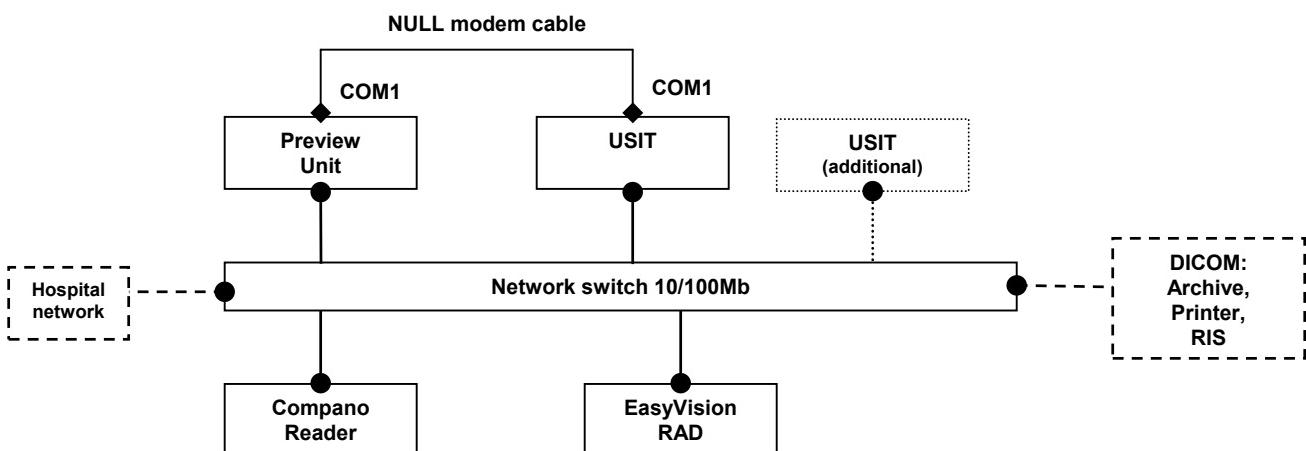
Set the Reader type in the USIT configuration accordingly to AC500/5000. The **Reader ID** in the USIT configuration must always be set to "A", even if there are more than one Readers in the same cluster. Otherwise the USIT comes up with an error message: "Reader ID mismatch".

When configuring the Reader within the EasyVision RAD configuration program you need to configure a **Reader Node** using the IP address of the Preview Unit.

### 2.2 Installation overview

1. Unpacking and installing the Reader.
2. Unpacking and installing the PCR Preview Unit (PC) + Monitor.
3. Software installation and configuration at the Preview Unit according to the Release Bulletin PCR Compano.
4. Unpacking and installing the USIT(s) and Operation Panel(s).
5. Software installation and configuration at the USIT according to the Release Bulletin USIT(s).
6. Unpacking and installing the EasyVision RAD(s).
7. Software configuration according to the Release Bulletin EasyVision RAD.
8. Final checks.

### 2.3 Connection diagram

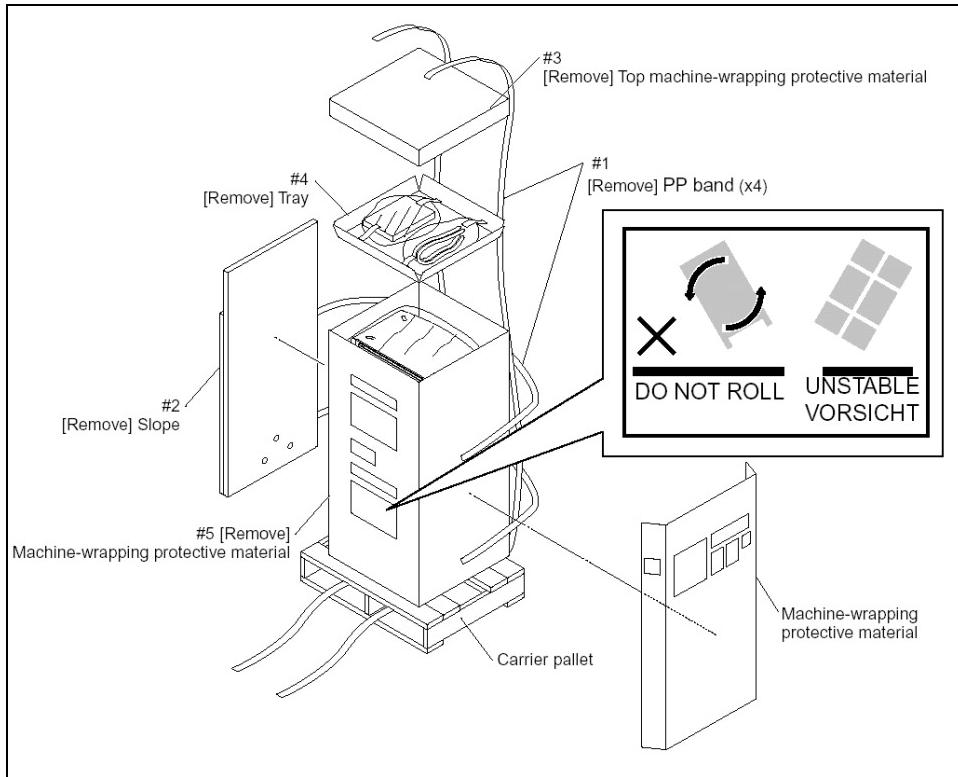


**Note:** When configuring the Reader within the EasyVision RAD configuration program you must configure a **Reader Node** using the IP address of the Preview Unit.

## 2.4 Installing the Reader

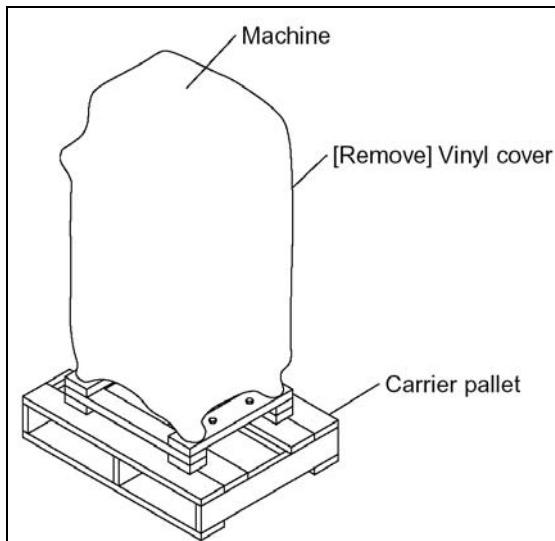
### 2.4.1 Unpack the Reader

1. Remove the machine-wrapping protective material.



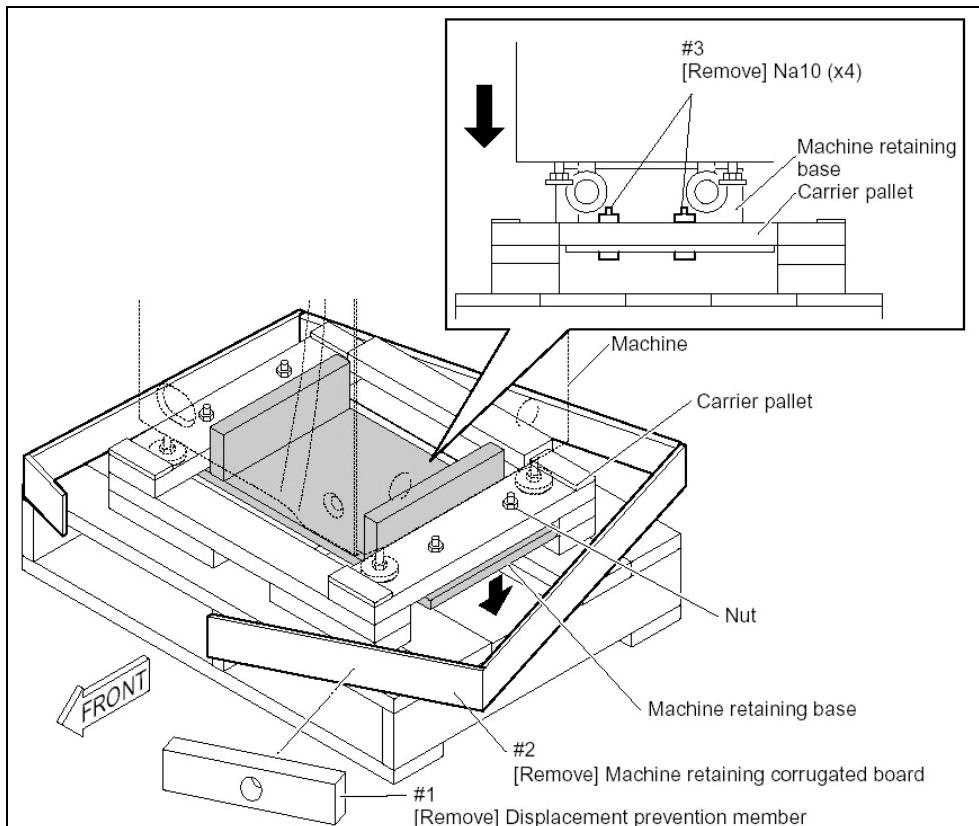
2. Remove the vinyl cover.

During the winter season, allow the machine to stand under its packaged condition for sufficient time before unpacking it. If the machine is unpacked immediately after it is carried into the room, moisture condensation may occur on the machine

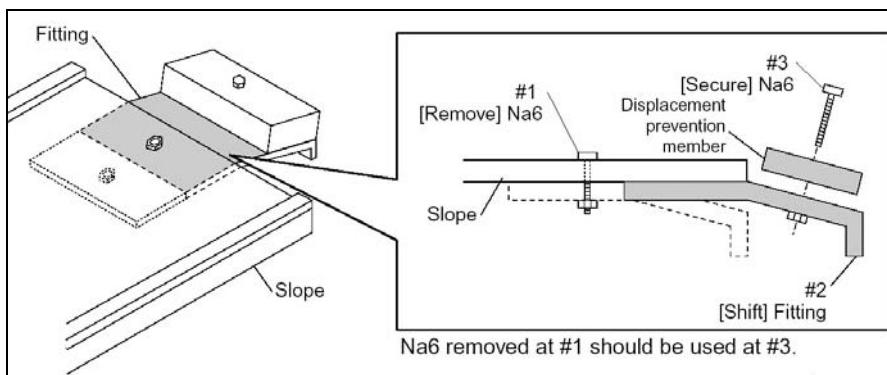


3. Lower the machine onto the carrier pallet. As the four nuts are loosened, the machine retaining base is lowered, so that the machine rests down on the carrier pallet.

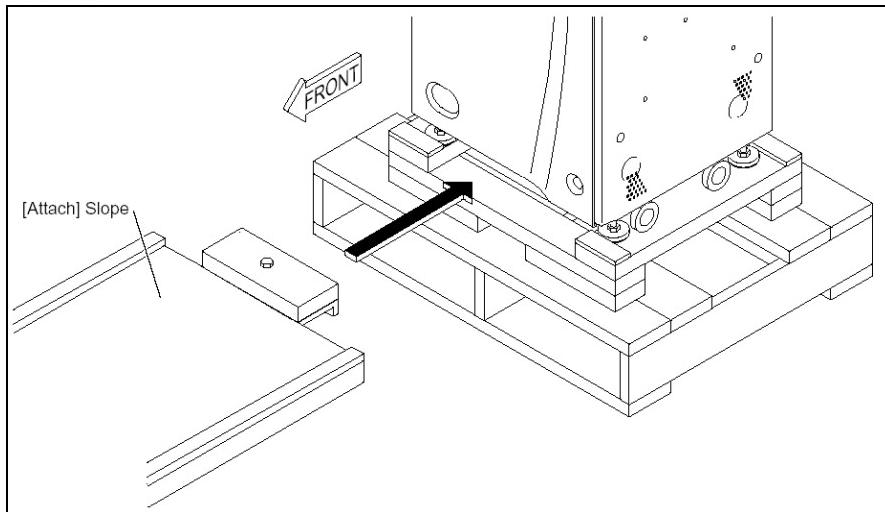
To remove the four nuts that secure the machine retaining base and carrier pallet, loosen the four nuts evenly one by one, and then remove them.



4. Attach the displacement prevention member.

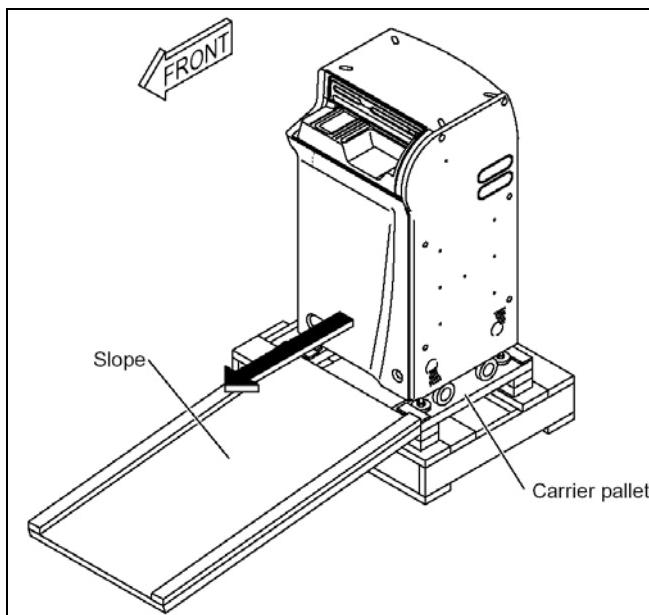


5. Slide the position of the fitting of the slope. The slope may be attached only to the front side of the machine.



6. When unloading the machine from the carrier pallet, **two persons** should cooperate to do so using care to prevent it from toppling down. In this case, the two persons should be positioned, one at the right-hand side and the other at the left-hand side of the machine

Move the reader from the pallet.

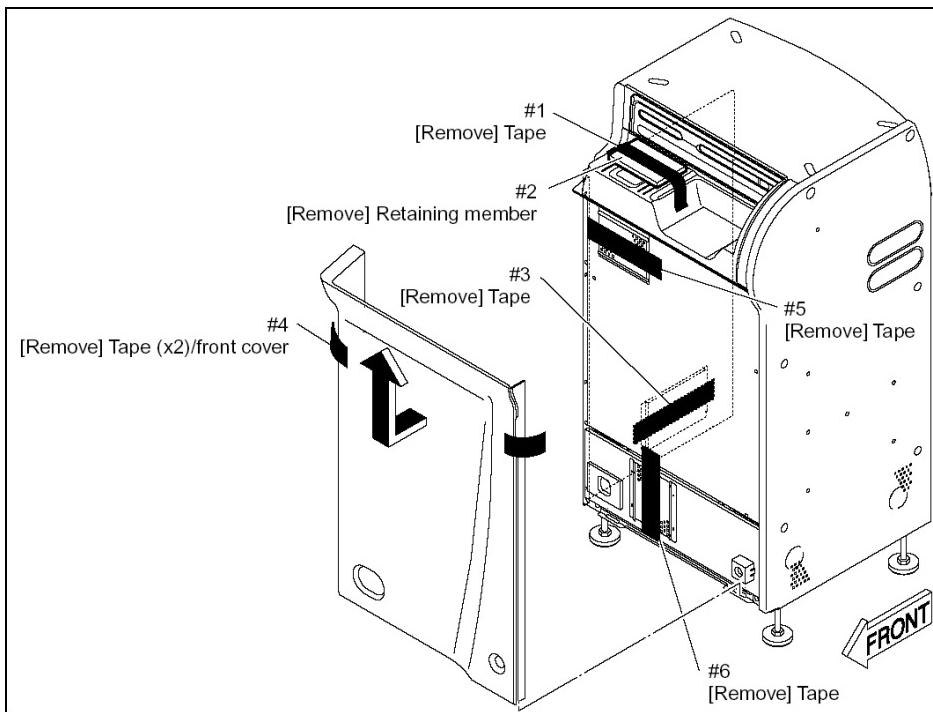


#### 2.4.2 Checking the items supplied

Item	Qty.	Remark	Check
Machine-specific data floppy	1		
CD-ROM (Reader software)	1		
Fuse set	1	Spare	
Ferrite bead	1	For network cable	
Inch/metric label	1		
Power cable 230V	1	Europe (not U.K.)	
Instruction Manual (Fuji)	-	Please recycle	

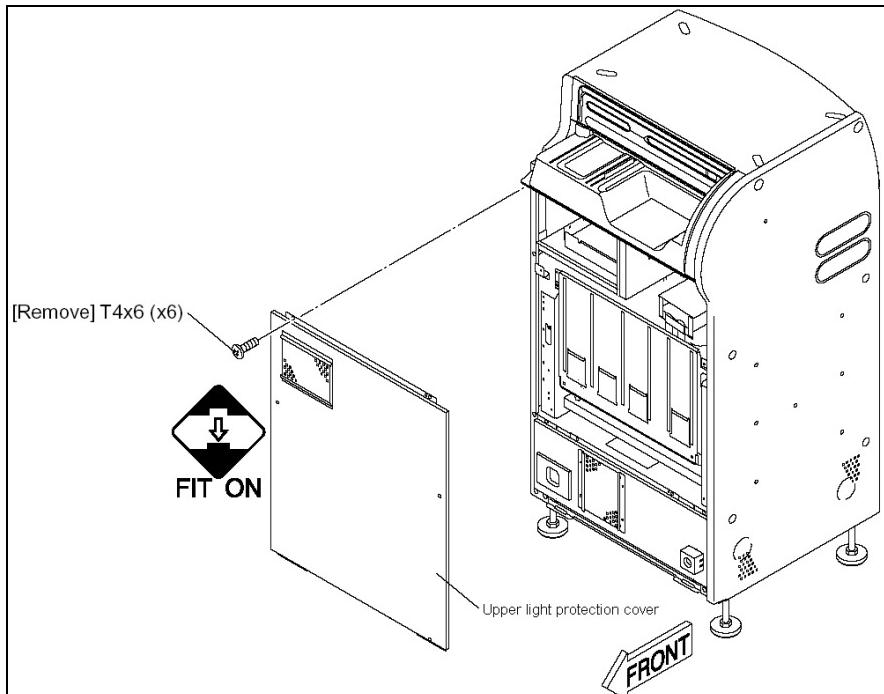
### 2.4.3 Removing the packing materials

Remove the packing materials as shown below.



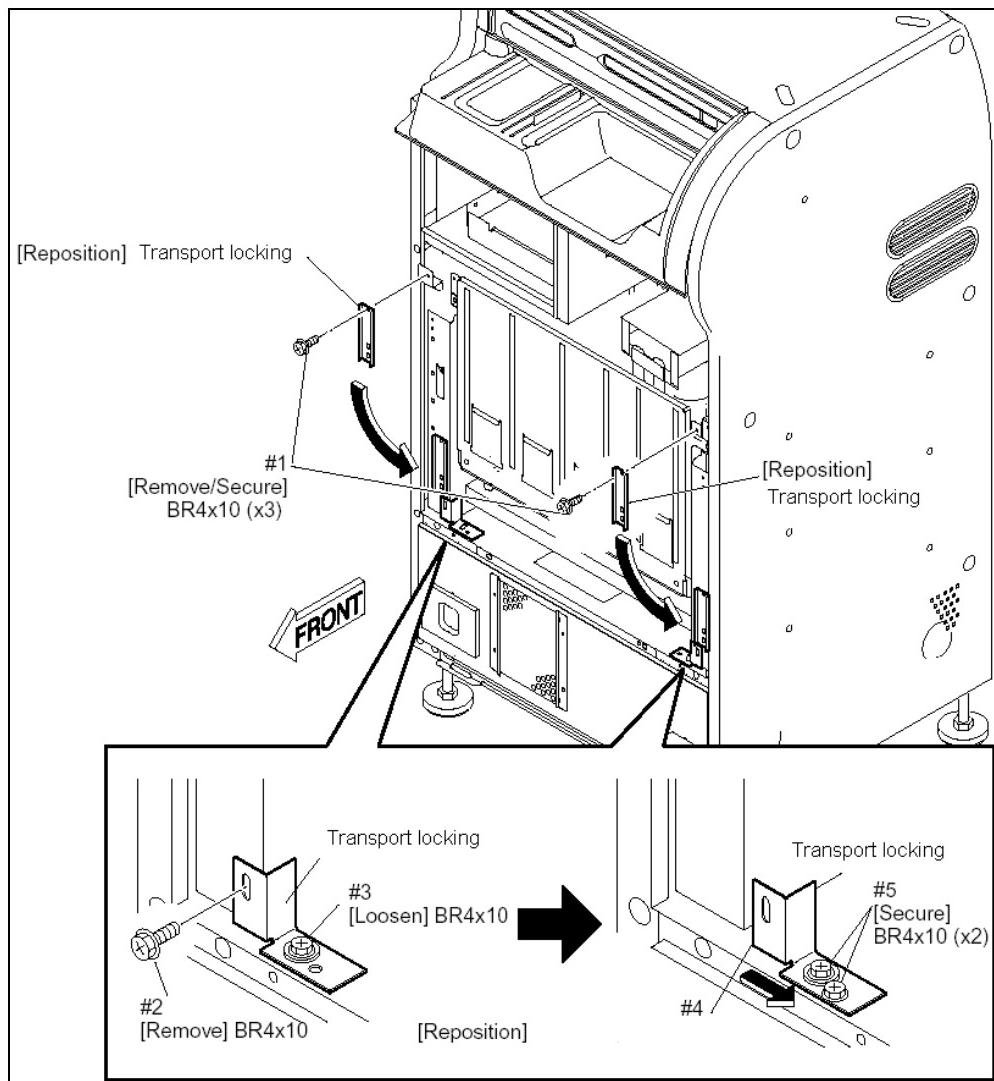
### 2.4.4 Removing the transport lockings

1. Remove the upper light protection cover.



2. Remove the 4 transport lockings and park them as shown. One screw for each of the right and left lockings removed at step #2 should be used at step #5.

The transport lockings may be removed along the rope.



3. Reseat the cover.

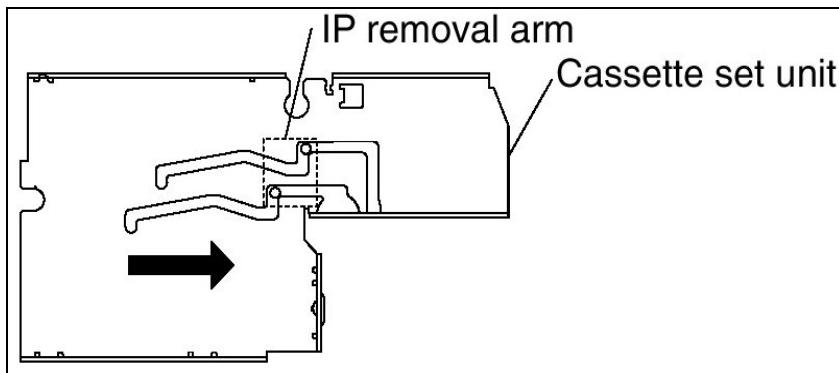
#### 2.4.5 Setup for inch cassettes

The Reader is factory set for metric cassettes. For using inch cassettes you need to adapt the cassette set unit and change the DIP switch settings on the CPU board. Please follow the instructions below.

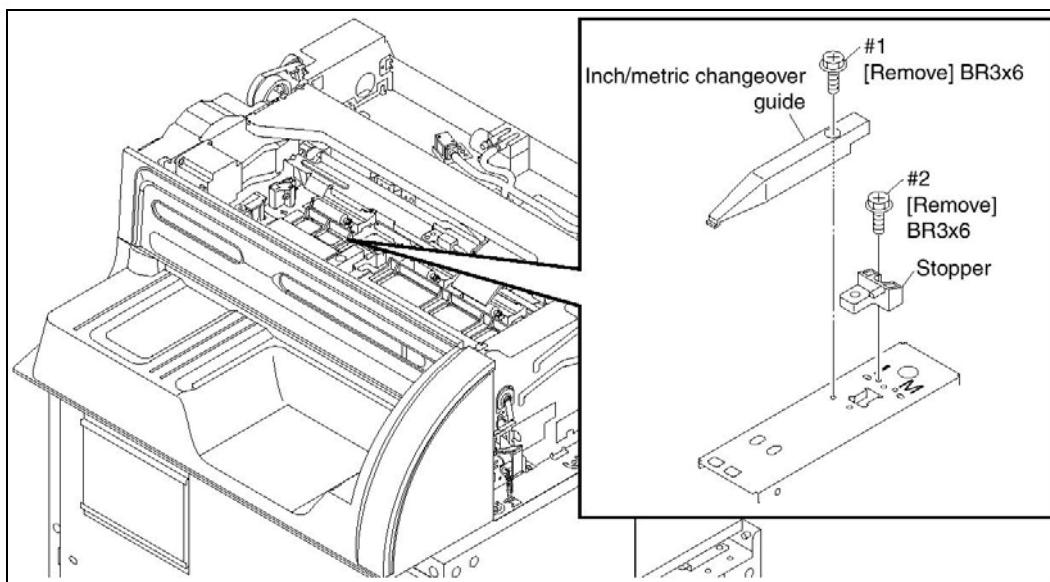
1. Remove the covers:

- Front cover
- Right-hand side cover
- Left-hand side cover
- Top cover

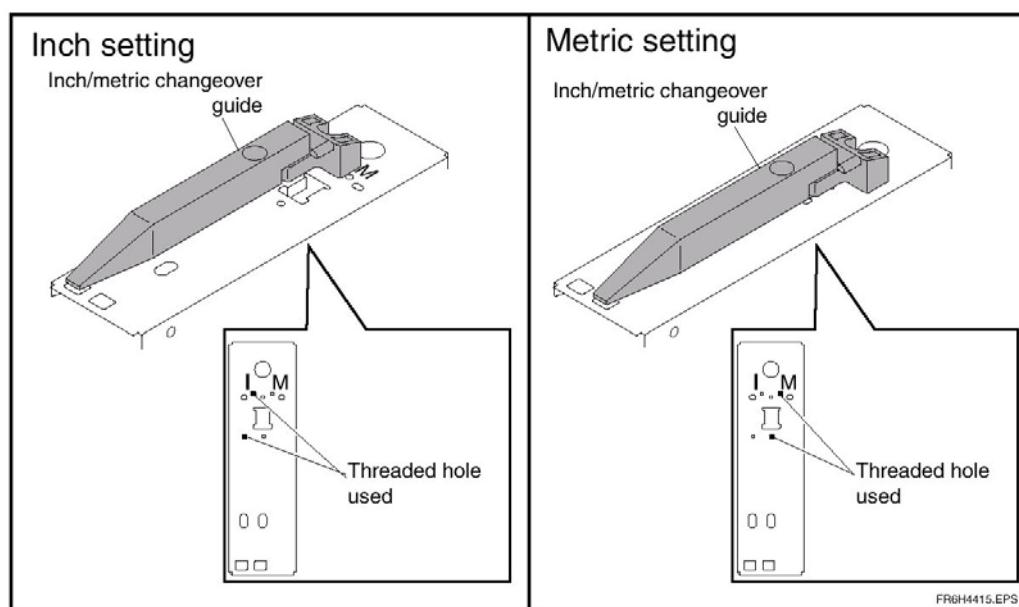
2. Move the IP removal arm to its home position before performing the procedures.



3. Remove the inch/metric changeover guide.



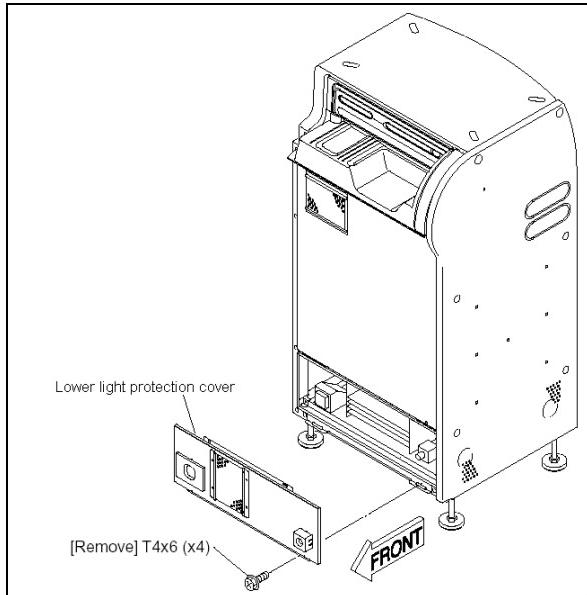
4. Install the inch/metric changeover guide as instructed in the illustration below according to the setting selected.



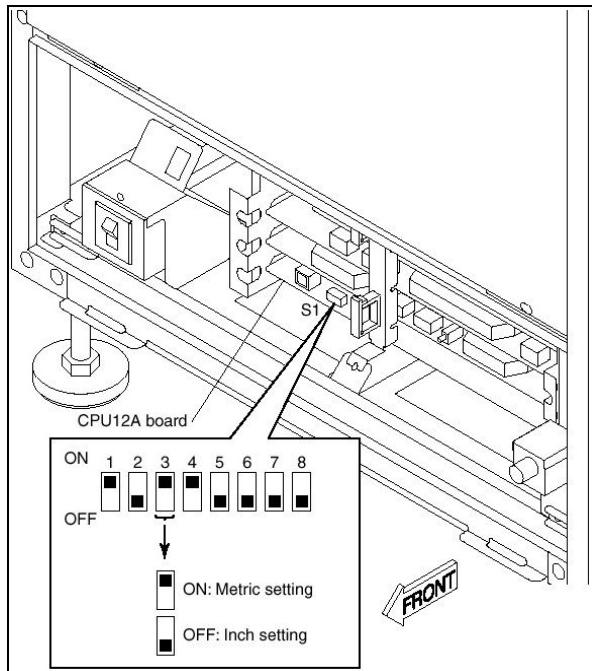
5. Re-install the covers.

#### 2.4.6 Checking the CPU settings

1. Remove the lower light protection cover.



2. Check the DIP-switch settings on the CPU board.



Set switch 3 according to the cassette sizes used.

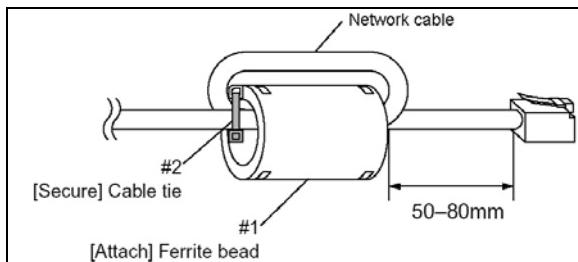
3. Reseat the lower light protection cover.
4. Reseat the front cover.

#### 2.4.7 Connecting the cables

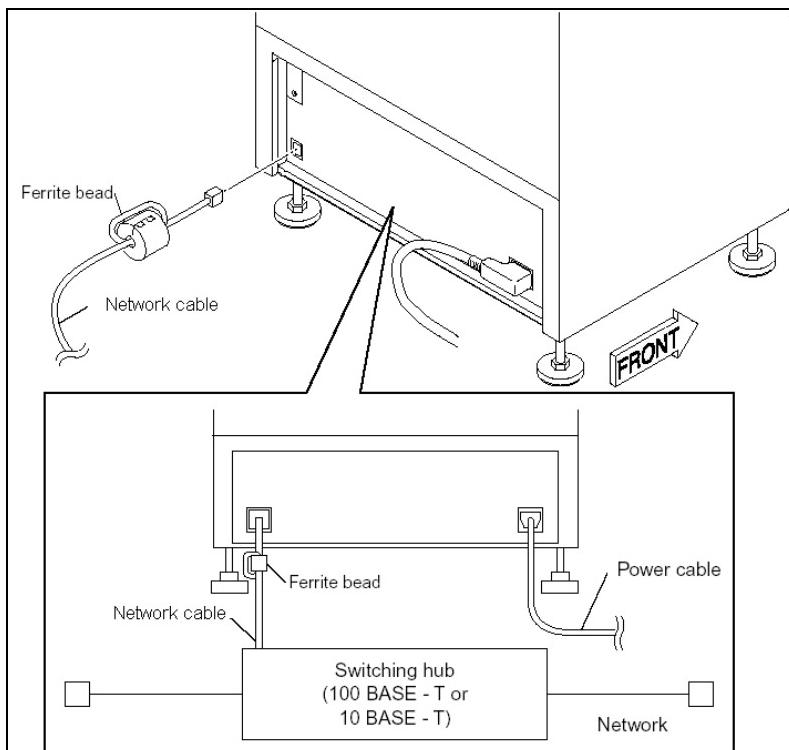
Either the UTP type or STP type for the network connection may be connected to the Reader. However, even when the cable is of shielded type (STP type), the ferrite bead should be attached to it.

Make sure that 50 to 80 mm of the cable protrudes from the ferrite bead on the side you will install attach to the Reader.

1. Attach the ferrite bead to the network cable.



2. Connect network and power cables to the Reader.



3. Do **not** switch on the reader yet.

## 2.5 Installing the Preview Unit

### 2.5.1 Unpacking

- Unpack the PC
- Unpack the monitor

### 2.5.2 Checking the items supplied

Item	Qty.	Remark	Check
<b>PC IBM Netvista M42</b>			
Keyboard	1	U.S. layout	
Mouse	1	PS/2	
Serial cable, 5 m (Nullmodem)	1	Connection to USIT	
Power cable 115 V	3	U.S.	
Power cable 230 V	1	Europe (not U.K.)	
STP patch cable	2	network	
Sticker "Certificate of Authenticity"	1	License for Windows 2000	
<b>Touch screen (optional)</b>			
Microtouch display	1		
CD-ROM	1	Driver software for touch screen	
External power supply + cable	1	100 - 240 V	

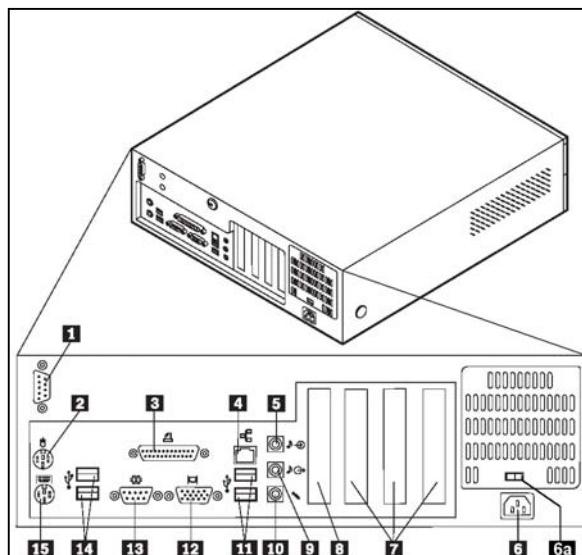
Some connectors on the rear of the computer are color-coded to help to determine where to connect the cables on the computer. The following illustration shows the location of the connectors on the rear of the computer (IBM Netvista M42, Type 8303).

### 2.5.3 Cable connections

Connect the cables accordingly:

- |                       |   |                          |
|-----------------------|---|--------------------------|
| 1 Serial port (COM2)  | → | touch screen (optional)  |
| 2 Mouse connector     | → | mouse                    |
| 4 Ethernet connector  | → | network cable            |
| 6 Power connector     | → | power cable              |
| 12 VGA connector      | → | monitor / display        |
| 13 Serial port (COM1) | → | Null modem cable to USIT |
| 15 Keyboard connector | → | keyboard                 |

Set the power selector switch [6a] according to the local mains voltage to 115 V or 230 V (default is 230V).

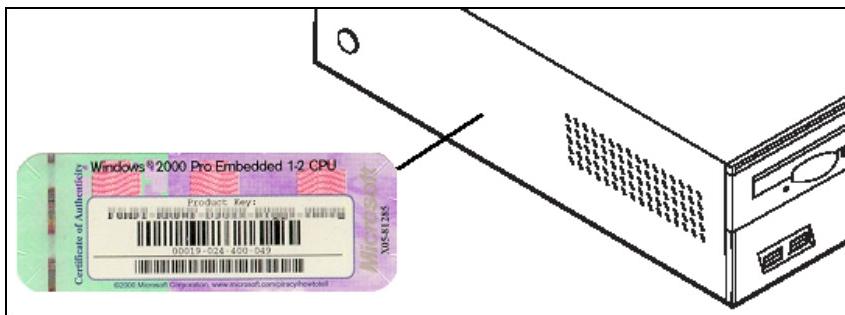


### 2.5.4 Software installation and configuration

Now perform software installation and configuration according to the **Release Bulletin PCR Preview Unit**.

### 2.5.5 Certificate of authenticity

For legal reasons: Place the separately delivered (together with the CE-documents) sticker **Certificate of Authenticity** for Windows 2000 on the left hand side of the PC cover. If a sticker already exists place the new sticker onto the existing one.



## 2.6 Installing the PCR User Terminal(s)

### 2.6.1 Unpacking

- Unpack the PC(s).
- Unpack the Operation Panel(s).

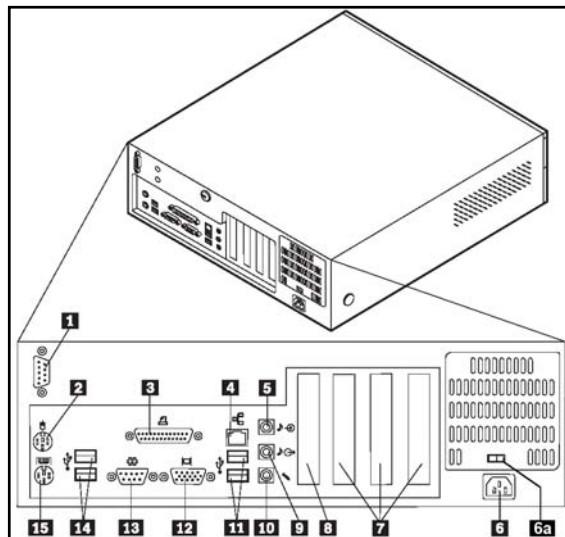
### 2.6.2 Checking the items supplied

Item	Qty.	Remark	Check
<b>PC IBM Netvista M42</b>			
Keyboard	1	U.S. layout	
Mouse	1	Spare	
Serial cable, 3 m (Nullmodem)	1	Spare	
Power cable, 115 V	3	U.S.	
Power cable, 230 V	1	Europe (not U.K.)	
STP patch cable	2	network	
<b>Operation Panel</b>			
Power cable, 115 V	1	U.S.	
Power cable, 230 V	1	Europe (not U.K.)	
VGA cable	1		
PS/2 cable	1		
Feet	2		
Holder for barcode scanner	-	optional	
Barcode Scanner incl. Y cable	-	optional	
Wall Mount for Operation Panel	-	optional	

### 2.6.3 Cable connections

Connect the cables accordingly:

- |                       |                                    |
|-----------------------|------------------------------------|
| 4 Ethernet connector  | → network cable                    |
| 6 Power connector     | → mains cable                      |
| 12 VGA connector      | → USIT Operation Panel             |
| 13 Serial port (COM1) | → Null modem cable to Preview Unit |
| 15 Keyboard connector | → PS/2 cable to Operation Panel    |



Set the power selector switch [6a] according to the local mains voltage to 115 V or 230 V (default is 230V).

### 2.6.4 Software installation and configuration

Now perform software installation and configuration according to the **Release Bulletin PCR User Terminal**.

Please note that the **Reader ID** in the USIT configuration must always be set to "A", even if there are more than one Readers in the same cluster. Otherwise the USIT comes up with an error message: "Reader ID mismatch".

Select the **Reader type** depending on the software releases:

USIT 1.5L2	3 = AC500, AC 3000, AC 5000 or 9000
USIT 1.5L3 and higher	1 = Preview Unit 1.2 and higher or 2 = Preview Unit 1.1, AC 500(0) / 3000 / 9000 reader

## 2.7 Installing the EasyVision

### 2.7.1 Unpacking

- Unpack the EasyVision RAD and its components including the monitor.

### 2.7.2 Cable connections

- Make sure the power selector switch of the computer is set to the correct mains voltage.
- Connect the hardware components of the EasyVision RAD according to the belonging sub-system Service Manual.
- Connect power cable to mains and connect network cable (STP) to the network.

### 2.7.3 Software configuration

Now perform software configuration according to the **Release Bulletin EasyVision RAD**.

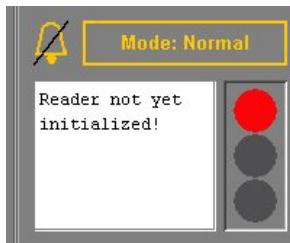
**Note**

*When configuring the Reader within the EasyVision RAD configuration program you need to configure a Reader Node using the IP address of the PCR Preview Unit.*

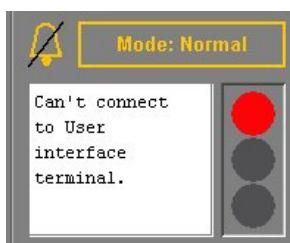
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### 3 First start-up

1. Switch on the Reader, switch on the Preview Unit.
2. The Compano application software starts automatically in a minute.
3. When starting the application is done the application window shows a message to indicate that the Reader is being initialized and the traffic light is still on red:



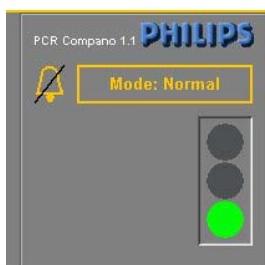
4. Switch on the USIT, switch on the EasyVision.
5. When the Reader has initialized, the error message **Reader not yet initialized** should disappear.
6. While the USIT is still booting you'll get an error window and the status window shows:



7. Wait until the USIT is up and running, then click [Confirm] to the error message on the Preview Unit:



8. Now you should get GREEN at the traffic light. The system is operational.



### 3.1 Final checks

Run the following checks on the output image:

- Format check
- Irregularity check
- Film output
- Output to archive, etc.

1. Have on the hand the IP to be used. Perform a **primary erasure** for this IP.

For details on the primary erasure procedure, see instructions for use.

- Check the output image with all IP sizes that are used in the hospital.

- Use Type VI IPs.

- Make sure that no important image data (e.g., patient images) are exposed on the IPs to be checked.

2. Expose the IP to 1 mR of radiation.

If the IPs cannot exactly be exposed to 1 mR, use the following IP exposure conditions as a guidance. Note, however, that the following conditions are used as a guide for standard IP setup.

**Distance :** 1.8 m

**Voltage :** 80 kV

**Current :** 50 mA

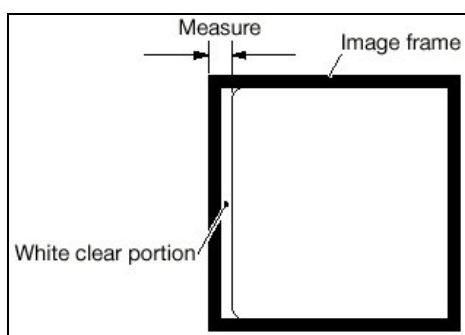
**Time :** 0.013 sec

3. At the USIT schedule a test patient and select **Sensitivity** from **Test** as the exposure menu.

4. Set a cassette in the cassette setting unit of the Reader. The image is read and transferred to the Preview Unit.

5. Check that there is no IP jam. The IP should be free from any scratch or damage after reading.

6. At the EasyVision: Check that the white clear portion of the resulting output film does not exceed 2 mm in width (when a 100% image output is generated).



7. Check that the output film and the image displayed on the monitor are both free from peculiar irregularities. There should be no offensive noise.

If any abnormality is encountered, see chapter "Troubleshooting" of the Reader Service Manual.

8. Check that the film annotation character format information entered is properly printed out onto the film. Also, check for blurred, chipped, or otherwise abnormal character printings.

9. Check that image quality on Preview monitor, EasyVision monitor and other devices (archive, viewing station...) match each other.

### 3.2 Cleaning the equipment

Clean the monitors and the computers with a dry cloth. Clean the covers of the Reader with a moistened cloth.